

B. The table at the right represents the costs from another company, The Big T.

1. Compare the costs for this company with the costs for the two companies in Question A.
2. Does this plan represent a linear relationship? Explain.
3. **a.** Could the point (20, 84) lie on the graph of this cost plan? Explain.
b. What information about the number of T-shirts and cost do the coordinates of the point (20, 84) represent?

T-Shirt Costs

| n | C |
|-----|------|
| 0 | 34 |
| 3 | 41.5 |
| 5 | 46.5 |
| 8 | 54 |
| 10 | 59 |

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2.4 Connecting Tables, Graphs, and Equations

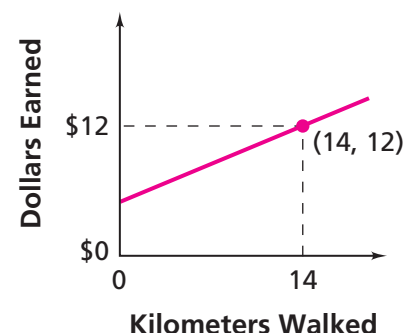
Look again at Alana's pledge plan from Problem 1.3. Suppose A represents the dollars owed and d represents the number of kilometers walked. You can express this plan with the equation below:

$$\text{Alana's pledge plan: } A = 5 + 0.5d$$

Getting Ready for Problem 2.4

- Explain why the point (14, 12) is on the graph of Alana's pledge plan.
- Write a question you could answer by locating this point.
- How can you use the equation for Alana's pledge plan to check the answer to the question you made up?
- How can you use a graph to find the number of kilometers that Alana walks if a sponsor pays her \$17? How could you use an equation to answer this question?

Alana's Pledge Plan



In the next problem, you will investigate similar questions relating to pledge plans for a walkathon.

Problem 2.4 Connecting Tables, Graphs, and Equations

Consider the following pledge plans. In each equation, y is the amount pledged in dollars, and x is the number of kilometers walked.

Plan 1 $y = 5x - 3$ Plan 2 $y = -x + 6$ Plan 3 $y = 2$

- A.** For each pledge plan:
1. What information does the equation give about the pledge plan?
Does the plan make sense?
 2. Make a table for values of x from -5 to 5 .
 3. Sketch a graph.
 4. Do the y -values increase, decrease, or stay the same as the x -values increase?
- B.** Explain how you can use a graph, table, or equation to answer Question A, part (4).
- C.**
1. Which graph from Question A, part (3), can be traced to locate the point $(2, 4)$?
 2. How do the coordinates $(2, 4)$ relate to the equation of the line?
To the corresponding table of data?
 3. Write a question you could answer by locating this point.
- D.**
1. Which equation has a graph you can trace to find the value of x that makes $8 = 5x - 3$ a true statement?
 2. How does finding the value of x in $8 = 5x - 3$ help you find the coordinates for a point on the line of the equation?
- E.** The following three points all lie on the graph of the same plan:
- $(-7, 13)$ $(1.2, \blacksquare)$ $(\blacksquare, -4)$
1. Two of the points have a missing coordinate. Find the missing coordinate. Explain how you found it.
 2. Write a question you could answer by finding the missing coordinate.

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